

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Previously presented) A process for preparing methionine, homoserine and/or lysine in a transgenic plant, wherein the process comprises:

- a) introducing a nucleic acid comprising a nucleotide sequence encoding a threonine-degrading protein or a nucleic acid which increases threonine degradation in a plant, wherein the nucleic acid comprises
 - i) the nucleotide sequence of SEQ ID NO: 1;
 - ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2, or
 - iii) a nucleotide sequence encoding a polypeptide having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 2;
- b) expressing the nucleotide sequence in the plant, and
- c) harvesting the plant or obtaining one or more of the amino acid methionine, homoserine, or lysine from the plant.

2-3. (Cancelled).

4. (Currently amended) The process of claim 1, wherein the process further comprises introducing a nucleic acid comprising a nucleotide sequence encoding a lysine-degrading protein ~~which wherein the nucleotide sequence comprises the consensus sequence of~~

~~— G[X]₄GIM[X]₄₅M[X]₂RK[X]₂M[X]₁₁GGXG[X]₃E[X]₂E[X]₃W (SEQ ID NO: 29), or~~
~~— LG[X]₉LVYGG[X]₃GIMGXVA[X]₉G[X]₃GXIP[X]₂₄MIHRK[X]₂M[X]₆F[X]₃PGG~~
~~— XGTXEE[X]₂E[X]₂TW[X]₂IG[X]₃KP[X]₄N[X]₃FY[X]₁₄F (SEQ ID NO: 30),~~

- i) the nucleotide sequence of SEQ ID NO: 11, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 23, or SEQ ID NO: 25;
- ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 12, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 22, SEQ ID NO: 24, or SEQ ID NO: 26; or

iii) a nucleotide sequence encoding a polypeptide having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 12, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 22, SEQ ID NO: 24, or SEQ ID NO: 26; or
a nucleic acid encoding a protein which increases threonine degradation and lysine degradation in the plant.

5-6. (Cancelled).

7. (Previously presented) The process of claim 1, wherein the transgenic plant is cultivated and harvested after introduction and expression of the nucleic acid.

8. (Cancelled).

9. (Previously presented) The process of claim 1, wherein the essential amino acid methionine is involved.

10. (Cancelled).

11. (Previously presented) The process of claim 29, wherein the transgenic microorganism is selected from the group of genera *Corynebacterium*, *Brevibacterium*, *Escherichia*, *Bacillus*, *Rhodotorula*, *Hansenula*, *Schizosaccharomyces*, *Saccharomyces*, *Candida*, *Claviceps* and *Flavobacterium*.

12. (Previously presented) The process of claim 1, wherein the transgenic plant is a crop plant.

13. (Previously presented) The process of claim 12, wherein the transgenic plant is selected from the group consisting of peanut, oilseed rape, canola, sunflower, safflower, olive, sesame, hazelnut, almond, avocado, bay, pumpkin, lettuce, flax, soybean, pistachio, borage, corn, wheat,

rye, oats, millet, triticale, rice, barley, cassava, potato, sugar beet, feed beet, aubergine, tomato, pea, alfalfa and perennial grasses and feed crops.

14. (Previously presented) The process of claim 1, wherein the nucleotide sequence is from a eukaryote.

15. (Previously presented) The process of claim 1, wherein the nucleotide sequence is from the genus *Saccharomyces*.

16. (Previously presented) The process of claim 1, wherein the nucleic acid is incorporated into a nucleic acid construct or a vector for introduction and expression in said transgenic plant.

17. (Previously presented) The process of claim 1, wherein additional biosynthesis genes of the amino acid prepared in the process are introduced into the plant.

18-25. (Cancelled).

26. (Previously presented) The process of claim 1, wherein the nucleic acid comprises a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2.

27. (Withdrawn) A process for producing an animal or human food, cosmetics or pharmaceuticals, comprising obtaining the amino acids produced according to the process of claim 1, and formulating the amino acids into an animal or human food, cosmetics or pharmaceuticals.

28. (Previously presented) The process of claim 1, further comprising isolating the amino acid from the transgenic plant, the culture medium, or the transgenic plant and the culture medium.

29. (Previously presented) A process for preparing methionine, homoserine and/or lysine in a transgenic microorganism, wherein the process comprises:

- a) introducing a nucleic acid comprising a nucleotide sequence encoding a threonine-degrading protein or a nucleic acid which increases threonine degradation in a microorganism, wherein the nucleic acid comprises
 - i) the nucleotide sequence of SEQ ID NO: 1;
 - ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2, or
 - iii) a nucleotide sequence encoding a polypeptide having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 2;
- b) expressing the nucleotide sequence in the microorganism, and
- c) harvesting the microorganism or obtaining one or more of the amino acid methionine, homoserine, or lysine from the microorganism.

30. (Previously presented) The process of claim 28, further comprising isolating the amino acid from the transgenic microorganism, the culture medium, or the transgenic microorganism and the culture medium.